CLEAN COPY OF AMENDED CLAIMS

1. (Twice Amended) A method for fabrication of ferroelectric capacitor elements of an integrated circuit comprising the steps of:

deposition of an electrically conductive bottom electrode layer;

deposition of a layer of ferroelectric dielectric material;

annealing the layer of ferroelectric dielectric material to form perovskite phases with a first anneal;

deposition of an electrically conductive top electrode layer;

annealing the layer of ferroelectric dielectric material with a second anneal, the second anneal changing the layer of ferroelectric material into grains having a columnar structure, being performed by rapid thermal annealing and performed after the step of deposition of an electrically conductive top electrode layer;

etching the electrically conductive top electrode layer; and

annealing the layer of ferroelectric dielectric material with another anneal after etching the electrically conductive top electrode layer.

12. (Twice Amended) A method for fabrication of ferroelectric capacitor elements of an integrated circuit comprising the steps of:

deposition of an electrically conductive bottom electrode layer comprising a noble metal;

deposition of a layer of ferroelectric dielectric material;

annealing the layer of ferroelectric dielectric material to form perovskite phases with a first anneal;

deposition of an electrically conductive top electrode layer comprising a noble metal oxide; and

annealing the layer of ferroelectric dielectric material with a second anneal, the second anneal changing the layer of ferroelectric material into grains having a columnar structure, being performed in an environment comprising a mixture of oxygen and inert gas, the oxygen having partial pressure of less than five percent of one atmosphere and

performed after the step of deposition of an electrically conductive top electrode layer.

27. (Amended) A method for fabrication of ferroelectric capacitor elements of an integrated circuit comprising the steps of:

deposition of an electrically conductive bottom electrode layer;

deposition of a layer of ferroelectric dielectric material by a sputtering method;

annealing the layer of ferroelectric dielectric material to form perovskite phases with a first anneal;

deposition of an electrically conductive top electrode layer; and

annealing the layer of ferroelectric dielectric material with a second anneal, the second anneal changing the layer of ferroelectric material into grains having a columnar structure and performed after the step of deposition of an electrically conductive top electrode layer.

30. (Amended) A method for fabrication of ferroelectric capacitor elements of an integrated circuit comprising the steps of:

deposition of an electrically conductive bottom electrode layer;

deposition of a layer of ferroelectric dielectric material;

annealing the layer of ferroelectric dielectric material to form perovskite phases with a first anneal;

deposition of an electrically conductive top electrode layer comprising amorphous iridium oxide; and

annealing the layer of ferroelectric dielectric material with a second anneal, the second anneal changing the layer of ferroelectric material into grains having a columnar structure and performed after the step of deposition of an electrically conductive top electrode layer.